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Spiders of the Family Salticidae from British Guiana and Venezuela.[1]

JOCELYN CRANE.
Research Zoologist, Department of Tropical Research, New York Zoological Society.

(Text-figures 1-5).

[This contribution is a result of various expeditions of the Department of Tropical Research of the New York Zoological Society to British Guiana and to Venezuela, all made under the direction of Dr. William Beebe. The Guiana expeditions were made during the years 1917, 1919, 1920, 1921, 1922 and 1924. The Venezuelan trip, in 1942, was sponsored by grants from the Committee for Inter-American Artistic and Intellectual Relations and from four trustees of the Zoological Society, George C. Clark, Childs Frick, Laurance S. Rockefeller and Herbert L. Satterlee, and by invaluable assistance from the Standard Oil Companies of New Jersey and Venezuela.]

CONTENTS.

INTRODUCTION.

This is the second of a series of papers on the salticid spiders collected at Kartabo, Bartica District, British Guiana, and Caripito, State of Monagas, Venezuela, by expeditions of the Department of Tropical Research of the New York Zoological Society under the direction of Dr. William Beebe. For maps and ecological data, refer to Beebe, 1925 and 1943; for general remarks on field notes, measurements and definitions of growth stages (immature= "imm.", and juvenile="juv."), see Crane, 1943.

All types are deposited in the collections of the Department of Tropical Research, New York Zoological Society, Bronx Park, New York 60, N. Y.

The carefully executed drawings are the work of George Swanson.

My thanks go to Dr. W. J. Gertsch and Dr. E. B. Bryant for their helpful suggestions and for furnishing comparison material.

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FAMILY SALTICIDAE.

Subfamily Thiodininae.

Psecas sumptuosus (Perty, 1833).

References: Psecas sumptuosus Petrunkevitch, 1911, p. 697 (References and synonymy to date). Mello-Leitao, 1941, p. 177 (Record only, British Guiana).

Color in Life (from painting): Female, probably immature: cephalothorax bright scarlet with a broad, closed oval ring of iridescent blue scales passing behind anterior eyes, through dorsals and curving behind posterior eyes across anterior part of thoracic region. Abdomen bright scarlet with four bands of iridescent blue scales, about equally spaced and equally broad, including a basal and a distal; the bands are narrower than intervening red portion. Tip of spinnerets scarlet. Anterior legs covered with long, violet-brown hairs, with patches of iridescent blue scales as follows: at distal end of femur, base of tibia and base of metatarsus. Second, third and fourth legs pale straw color; clypeus covered with iridescent blue scales, and a narrow border of them around cephalothorax.

Color in Alcohol: After two years in alcohol, the scarlet has vanished completely, and many scales are lost, the remaining ones being chiefly greenish and gold with no hint of blue; the general effect is much as in Peckham's description (1894, p. 98) of a much larger, 11.5 mm. preserved female.

Comparison with the males illustrated by Perty (pl. xxxix) and Koch (1846, fig. 1224), shows that there is no red on the cephalothorax, which is instead blue with dark markings, while the abdomen, instead of being red with blue bands as in our female, appears as definitely blue with red bands; this, however, may be a difference in delineation only. To Simon (1901, p. 468) the scales appeared green, not blue.

A juvenile male has the cephalothorax, abdomen and first legs brown, with iridescence barely commencing development; three posterior legs and underparts pale.

Measurements in mm.: Female, probably immature, total length 5.3; juvenile male, 4.2.

Range: Known from Brazil, the Guianas, the West Indies and Trinidad; the present is the first record from Venezuela.

Material: 2 specimens from Caripito, State of Monagas, Venezuela: 1942, May 15-30, 1 juv. ♂ (Cat. No. 42466); 1 imm. ♀, June (Cat. No. 42467; Col. Pl. No. 1545).

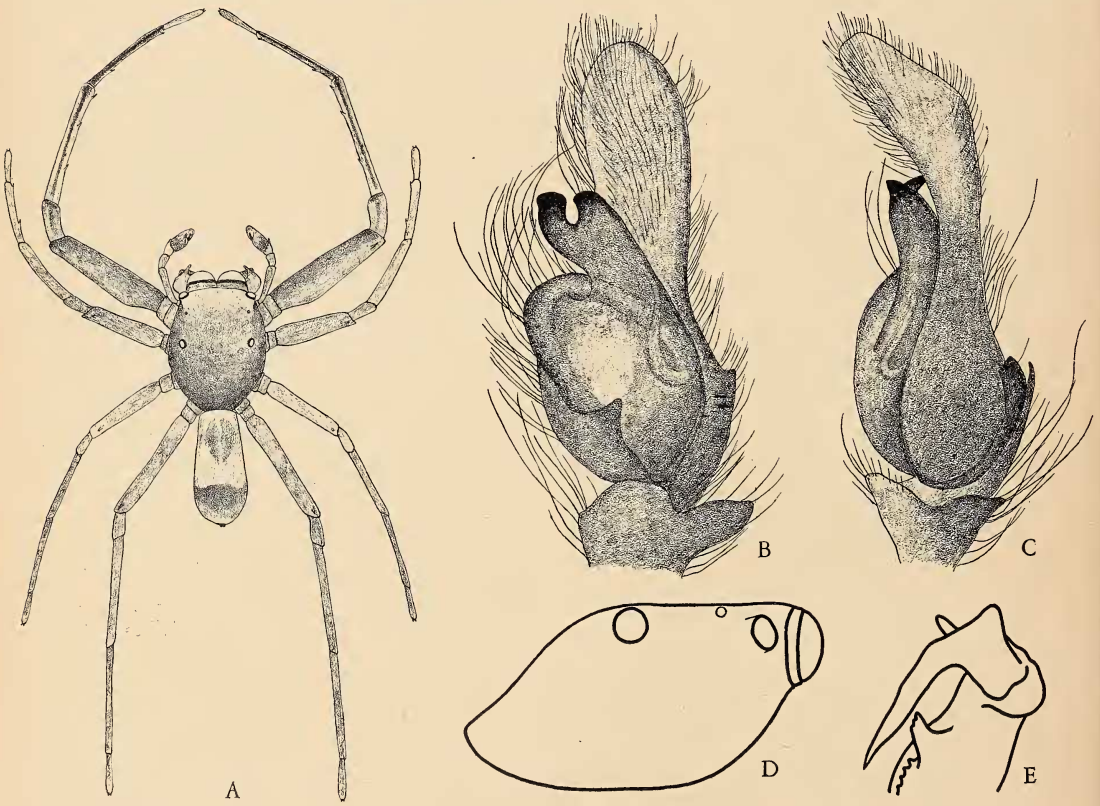
Scopocira carinata sp. nov.

Text-fig. 1.

Color in Alcohol: (Male holotype, after 27 years; apparently about to moult): Cephalothorax brown, except for paler ocular quadrangle; abdomen, underparts and all appendages pale; traces of black pigment in two indistinct bands on abdomen, above and below, and in longitudinal anterior and posterior stripes on all segments of at least first two and fourth legs. No scales or hairs remaining on body except for a few pale hairs around anterior eyes and on the very narrow clypeus; they are not nearly numerous or regular enough to give a "bearded" appearance.

Structure and Affinities: Typical of the genus, except for details of spinulation, as follows: The first tibia is armed with 4 spines, as in the previously known species, but the second spines (next to basal pair) are elevated and very minute; also, the members of the first and second pairs are not opposite, nor is the first pair isolated from the remainder. Rest of spines as follows: first and second metatarsi: 2 pairs; second tibia: 3, postero-ventral, unpaired; third and fourth metatarsi, 1 pair, distal, slender, minute; all femora: 1 unpaired, distal, dorsal.

The proposed new species is related to *S. vivida* (Peckham, 1900, p. 226), and is very close to *S. histrio* Simon, 1900 (p. 368), with which it may prove to be synonymous. It differs from the description and figure (1901, p. 442, fig. 499) of the latter as follows (exclusive of color pattern): the tip of the large tooth on inferior margin of chelicera has three distinct teeth as in *dentichelis* Simon, 1900 (1901, p. 442, fig. 498); at the apex of the inferior margin is a distinct small tooth on a large elevation (cf. *S. panamena* Chamberlin & Ivie, 1936, pl. viii, fig. 60); details and spinulation of the palpal tibia are apparently different. In our specimen a long crest, truncate distally, arises from the outer posterior side of the base of the tarsus, paralleling the longer of the two tibial spines, which is slender, simple and nearly straight. The embolus is divided at the tip, as in *histrio* and *vivida*,



TEXT-FIG. 1. *Scopocira carinata* sp. nov., ♂ holotype. **A**, dorsal view; **B**, left palpus, ventral view; **C**, same, ectal view; **D**, cephalothorax, lateral view; **E**, chelicera, ventral view.

but the branches do not diverge as in *vivida;* details not figured in *histrio.*

Measurements in mm.: Total length 3.5; cephalothorax 1.8; abdomen 1.7; width of cephalothorax 1.43. Tibia-patella: I, 2.7; III, 1.3; IV, 1.9.

Range: Known only from Kartabo, Bartica District, British Guiana.

Material: ♂ holotype, Kartabo, 1917, Sept. (Cat. No. 1750). Named *carinata* in reference to the characteristic crest on the palpal tarsus.

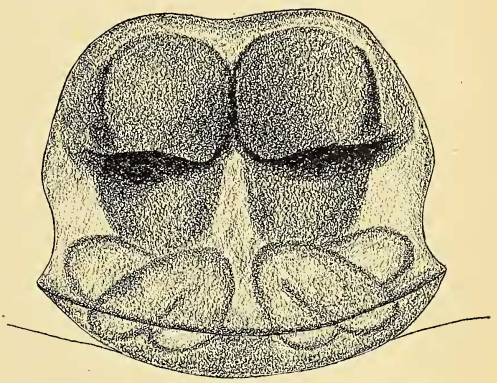
Thiodina pallida (Koch, 1846).

Text-fig. 2.

References: Thiodina pallida, Petrunkevitch, 1911, p. 712. (Synonymy to date.)

Color in Life: Adult females: Cephalothorax bluish-white to pale olive gray, except for ocular quadrangle which is russet, and two patches of rufous orange and white hairs between and behind posterior eyes (one on each side); small and posterior eyes each set in a large naked black spot with a few adjacent hairs of rufous and white; antero-median eyes, clear russet, changing to black, surrounded by white hairs. Abdomen pale maize yellow to white, covered with short hairs of same color, with a median dorsal pair of olive-buff or grayish-olive bands, and a pair of lateral stripes of grayish-white or pinkish: there is an irregular scattering of black dots on the dorsal surface and sides, very variable in arrangement, even on the two sides of the same female. Underparts pale olive gray to white, without dark spots or speckles. Legs and palpi bluish-white with a scattering of hairs of the same color. Young females: These differ from the adults as follows: the general color is translucent bluish-green with 5 or 7 reddish-brown or blackish spots on ocular quadrangle (in addition to the four regular black ocular spots, although they usually merge with these); the spots are arranged as follows: two as crescents behind anterior median eyes (these alone are sometimes indistinct or absent); two immediately behind small eyes, two between and slightly behind posterior eyes, and one in middle of quadrangle. Abdomen with the spots usually more distinct than in adult and confined to single rows on posterior half of the dark dorsal stripes. Legs translucent greenish-white.

Color in Alcohol: Females: the reddish-brown in both young and old remains only where hairs are present on cephalothorax, otherwise it is either faded or, in the young, persists as jet black spots; there is often a great deal of granular white showing beneath integument of cephalothorax. Except for the two pairs of darker stripes, the abdomen above and below presents a surface also covered with dead-white granules in all but the very young. Males: Our single nearly adult male (5.8 mm.) agrees in color in every detail with the description of Chamberlin & Ivie's holotype of *T. pseustes* except that the carapace is reddish-brown, not scarlet; the sternum is pale, not orange; there is a *puerpera*-like band of white hairs below dorsal eyes; there are no streaks below posterior eyes nor on posterior decline; basal two-thirds of first two femora pale (probably immature); the third and fourth coxae are pale, not dusky reddish-brown. In addition, our specimen has the posterior half of the cephalothorax narrowly bordered laterally with black, and the white stripes of the dorsal abdomen each contain a single row in posterior half of fine black dots. The juvenile male is exactly like the juvenile females in coloration, pale all over, except for 5 dark patches on ocular quadrangle, and faint abdominal stripes. Koch's plate (1846, fig. 1229) shows an intermediate color with the pigment on the legs partially developed.



TEXT-FIG. 2. *Thiodina pallida,* epigynum.

Structure: Typical of the genus. The 17 specimens in the collection, of which unfortunately only two are males, permit an unusual amount of comparison for a tropical species, showing the great amount of variation. The teeth on the chelicerae in particular are exceedingly variable, irrespective of sex and to a certain extent of size, although of course they tend to be fewer in the very young. Frequently different counts occur on the two sides of the same spider. On the ventral margin the range is from 1 minute tooth (found even in some large females) through a definitely fissidentate form to 3 moderate-sized well-separated teeth; Simon (1901, p. 455), records 3. On the superior margin the range is from 2 to 5, usually 3 or 4 (Simon records 4), the median ones often enlarged.

Spines: As will be seen, variation is considerable here too, and is found even on two sides of one specimen; in general spines are best developed in males, as may be seen

by the presence of spines in this sex only on the 1st and 2nd patellae, and the 2-2 arrangement of 1st tibial spines in male only; also, the median dorsal spines on all femora are usually strong in the males, but scarcely more than stiff hairs in females. Sporadic development of spines, especially on posterior legs, is typical of the young, and hence their numbers must be used more cautiously than usual in identification: the facies and color pattern are far more reliable. The posterior tibial spines of the first leg are very small, especially the distal, and irregularly placed, even in the larger male, while the posterior distal spine is always lacking in the female. The spines on all four legs are as follows: I—femur, 5 or 6 (3 or 4 distal); patella, 1 anterior (male only); tibia, male 2-2, female 2-1, in distal third; 2-2 bulbous hairs near base; metatarsus 2-2. II—femur 5 or 6 (3 or 4 distal); patella, rarely 1 anterior (found in young male only), usually 0, both sexes; tibia, male 2-2, plus 2 antero-lateral and 1 ventral (latter sometimes missing), female 1-1 or 1-0, in distal half plus 1 or 2 antero-lateral; no bulbous hairs; metatarsus 2-2. III—femur 6 to 8 (3 to 5 distal); patella 1-1; tibia, 1 proximo-dorsal (male only); lateral, male 3-3, female 2-3 or fewer; ventral, male 2-2, female 1-2 or 0-2; metatarsus, lateral 2-2, distant whorl 4, and, in male only, proximo-ventral 1-1. IV—femur 3 to 5 (2 to 3 distal); patella 1-1; tibia, proximo-dorsal 1 (male only); lateral, male 3-3, female and yg. male 2-3; ventral 1-2; metatarsus, lateral 3-3 or 2-3; proximo-ventral 1-1 or none; distal whorl 4.

Palp: Typical of the genus. Agrees perfectly with the figure of Chamberlin & Ivie, *T. pseustes*, 1936, pl. viii, figs. 61-62.

Measurements in mm.: Larger male 5.8; smaller male 5.2; largest female 10.1; smallest female 4.03.

Cocoon: The largest female was taken on a maize yellow cocoon, spun against the rib of a leaf on the under side; one thick band of webbing crossed the nest and was fastened to the leaf edges, drawing them slightly together; an entrance at each end of the cocoon.

Remarks: Through the kindness of Dr. Gertsch, some unrecorded specimens of *Thiodina* from the collections of the American Museum of Natural History were compared with the present Venezuelan and Guiana material. They included specimens from Panama and Paraguay, in addition to the well-known *puerpera* from Mexico and the United States. A complete survey of the material is impossible, but the following points may be brought out, indicating that the South American forms are distinct from those in North America, yet in several characters intermediate between the two northern species: *Male:* The cephalothorax markings of *pallida* include a white central spot, as in *sylvana*, a white bar beneath the dorsal eyes as in *puerpera;* streaks on posterior surface apparently lacking; a unique black marginal band of varying width around posterior half of cephalothorax. *Female:* no trace of black terminal spot on underside of abdomen (this is always present in adult *sylvana*, sometimes in *puerpera*); epigynum distinct. *Both sexes:* spines on second tibia, although variable as usual, about mid-way in number between those of *sylvana* and *puerpera*. Although the Venezuelan and Guiana specimens are otherwise exceedingly similar to those of Paraguay, they differ in the twisting of the tubules of the epigyna, which will perhaps prove to be of subspecific importance. It is interesting that in this genus the male palps are apparently useless for specific identification. The Panamanian material, save for one young male resembling the South American form with the addition of faint oblique posterior streaks on the cephalothorax (as in *sylvana* and *puerpera*), closely resembles *sylvana;* here again, however, the epigyna appear to be distinct. Chamberlin & Ivie's (1936) unique male holotype of *Thiodina pseustes* from Panama appears, from the description of the markings, to be identical with or close to *sylvana*, rather than to the South American form.

Habitat: In half a dozen cases where collecting records were made, the specimens were shaken from low bushes in the shade near the edge of low jungle.

Range: Known from all northern South American countries from Peru to Brazil, except Ecuador. The present are the first records from Venezuela and British Guiana.

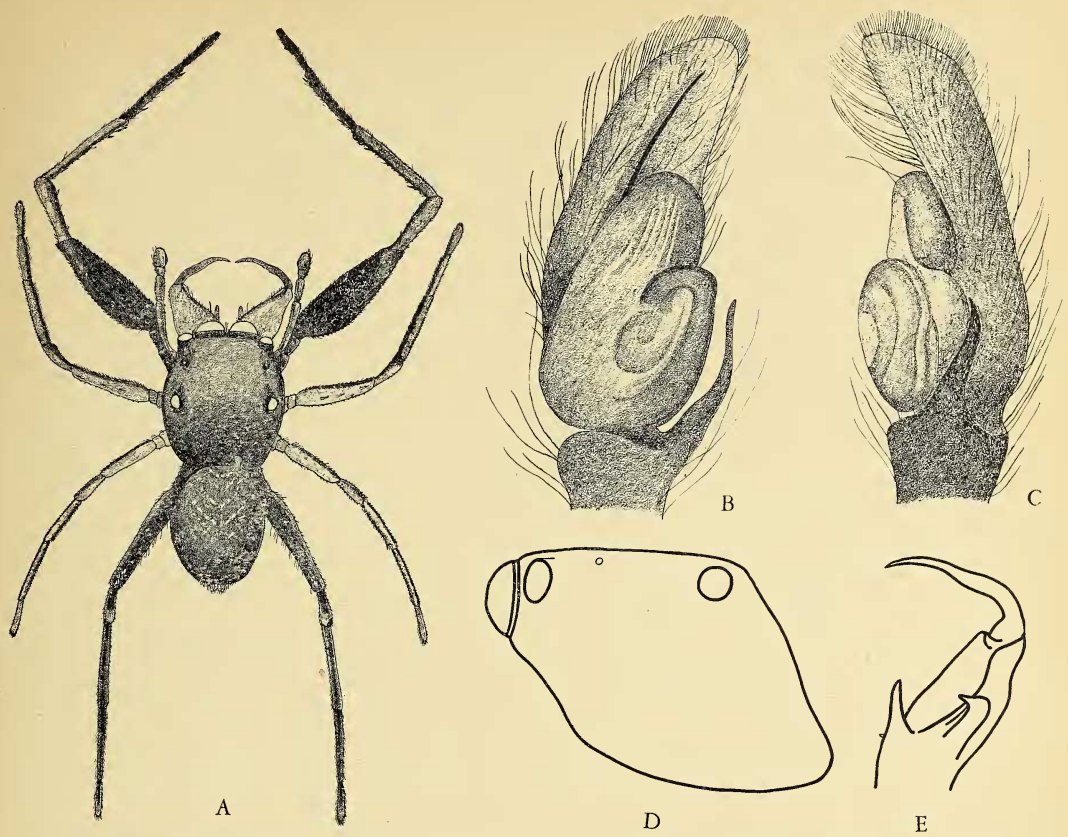
Material: The 17 specimens were distributed as follows: Kartabo, Bartica District, British Guiana: 1917: Sept., 1 juv. ♀ (Cat. No. 1717), 1 imm. ♀ (No. 1741). 1920: 1 juv. ♀ (No. 2030); Nov. 1-6, 1 imm. ♀ (No. 201493); 1 ♀ (No. 201639). 1921: 1 ♀ (No. 21313). 1924: Mar. 29, 1 ♀ (24328); Date?, 1 ♀, breeding, (24859). Caripito, State of Monagas, Venezuela: 1942: Mar. 17-25, 4 juv. and imm. ♀ (No. 4264); Apr. 1-15, 1 ♂ (No. 42468); Apr. 6-30, 1 juv. ♂ (No. 42469); May 24, 1 juv. ♀ (No. 42274; June 15-30, 1 imm. ♀ (No. 42270); Aug. 16-31, 1 imm. ♀ (No. 42271).

Subfamily Zygoballinae.

Zygoballus gracilipes sp. nov.

Text-fig. 3.

Color in Alcohol (after 20 years): Holotype male (unique specimen); Cephalothorax, palp, mouthparts and sternum reddish-brown. Abdomen, above and below, dark brown with fine, faint paler chevrons above and pale concentric streaks below.



TEXT-FIG. 3. *Zygoballus gracilipes* sp. nov., ♂ holotype. **A**, dorsal view; **B**, left palpus, ventral view; **C**, same, ectal view; **D**, cephalothorax, lateral view; **E**, chelicera, ventral view.

First leg: coxa, femur, trochanter, metatarsus and tarsus dark reddish-brown; patella and tibia light brown with a black line along anterior side of each segment. Second and third legs entirely pale horny, with anterior black line on all segments except coxa, trochanter and third tarsus, and posterior black line on tibia and metatarsus of third. Fourth legs: coxa, trochanter and femur dark brown, the latter with a light dorsal stripe and a few white scales; patella dark anteriorly, mostly light posteriorly; tibia, metatarsus and tarsus dark brown except for narrow pale stripes anteriorly and posteriorly and pale tip of tarsus.

Structure and Affinities: With the characteristics of the genus. This proposed new species is exceedingly close to *Z. rufipes* Peckham, 1885, from Texas, Mexico and Guatemala, from which it differs as follows: The first tibia is 8 to 9, not 5 to 6 times as long as wide; the labium is considerably wider; the posterior part of the cephalothorax is not indented as in Cambridge's figure (1900, pl. 27, fig. 167), although this may, of course, be merely a difference of preservation; in coloration the metatarsus and tarsus of the first legs are dark, not light, and details of coloration in the fourth legs (which differ in Cambridge's, p. 289, and Peckham's, 1909, p. 582, respective accounts of *rufipes*); the present specimen lacks white and iridescent scales except for a few on the fourth femora; this, however, is almost certainly due not to their absence but to their loss.

Cambridge (1900, p. 289, and pl. 27, fig. 16a) remarks that there is no visible spine at apex of palpal bulb in *rufipes*, but that this possibly is not a constant character. No spine was visible at first in our specimen, but gentle pressure of the bulb brought into view a very slender embolus, to lie in the usual furrow.

It is interesting to note that in passing from south to north in the series of related species *gracilipes* from South America, *rufipes* from Central America and Mexico, and *bettini* from the United States as far north as Maine, the legs, especially the first tibia, are progressively shorter and thicker.

Measurements in mm.: Male holotype: total length 3.59; cephalothorax 1.71; abdomen 1.88.

Range: Known only from Kartabo, Bartica District, British Guiana.

Material: One ♂, the holotype, Kartabo, 1924 (Cat. No. 241046).

Subfamily Dendryphantinae.

Lurio solennis (Koch, 1846).

Text-figs. 4 A-G.

References: Hyllus solennis Koch, 1846, p. 163, pl. cccclix, fig. 1217.

Lurio solennis, Simon, 1901, pp. 619, 626, 631, figs. 733, 734.

Color in Life: Female: Cephalothorax integument dark brown with narrow white marginal band, extending completely around clypeus. Ocular quadrangle covered with iridescent green scales; white scales behind anterior eyes, in a narrow line outside of small and posterior eyes, and in a narrow band across cephalothorax behind posterior eyes. Abdomen, integument wood brown with a broad median stripe and two pairs of vertical bands of lighter brown; 4 or 5 small anterior dorsal white spots, a curving basal marginal stripe, and three pairs of large white lateral spots; iridescent green scales covering all lighter brown areas. First pair of legs dark reddish-brown, remaining legs lighter brown. A few whitish scales on all femora, on first three patellae and on 2nd and 3rd tibiae. Underparts of cephalothorax dark reddish-brown, abdomen wood brown with paler longitudinal markings. The abdominal dorsal markings show with various degrees of clarity, depending on the swelling of the abdomen.

Color in Alcohol: Male: Brownish-black. No trace of the iridescence described by Koch and Simon remaining on cephalothorax and only faintly traceable on abdomen in two narrow dorsal stripes. A narrow marginal white band around cephalothorax, including the very narrow clypeus. Patches of white scales between small and posterior eyes, behind the latter and in a faint median patch between them. A white marginal band around abdomen distinct, as described by Koch and Simon. Blue scales described by Koch on legs white in preservative, present on femora of palp and all legs, and on patella, tibia and metatarsus of first three pairs, being numerous only on first pair.

Female, somewhat faded, especially in regard to iridescence, but otherwise as in life.

Measurements: Largest male, 6.9 mm., largest female 9.7 mm. Remaining specimens not much smaller.

Remarks: In structure our specimens check with Simon's description and figures in every detail, save that in each of our four males the distal tooth on the superior margin of the chelicera is well separated from the smaller basal tooth, instead of being contiguous (cf. Text-fig. 4D, present paper, with Simon's Fig. 733). It is somewhat variable, however, in position. The large tooth of the inferior border is decidedly variable in amount of curvature.

Range: Known previously from Colombia to Brazil. The present series were all taken at Kartabo, Bartica District, British Guiana.

Material: A total of nine specimens was taken, as follows: 1917: Sept., 1 ♂ (Cat. No. 1712). 1920: 2 ♂ (No. 2034); 3 ♀ (No. 201482). 1924: Mar. 20, 1 ♀ (No. 24199); April, 1 ♀ (No. 241047); May 22, 1 ♂ (No. 241048).

Parnaeus cyanidens (Koch, 1846).

Text-figs. 4H-M.

References: Phidippus cyanidens Koch, 1846, p. 156, pl. cccclviii, fig. 1211.

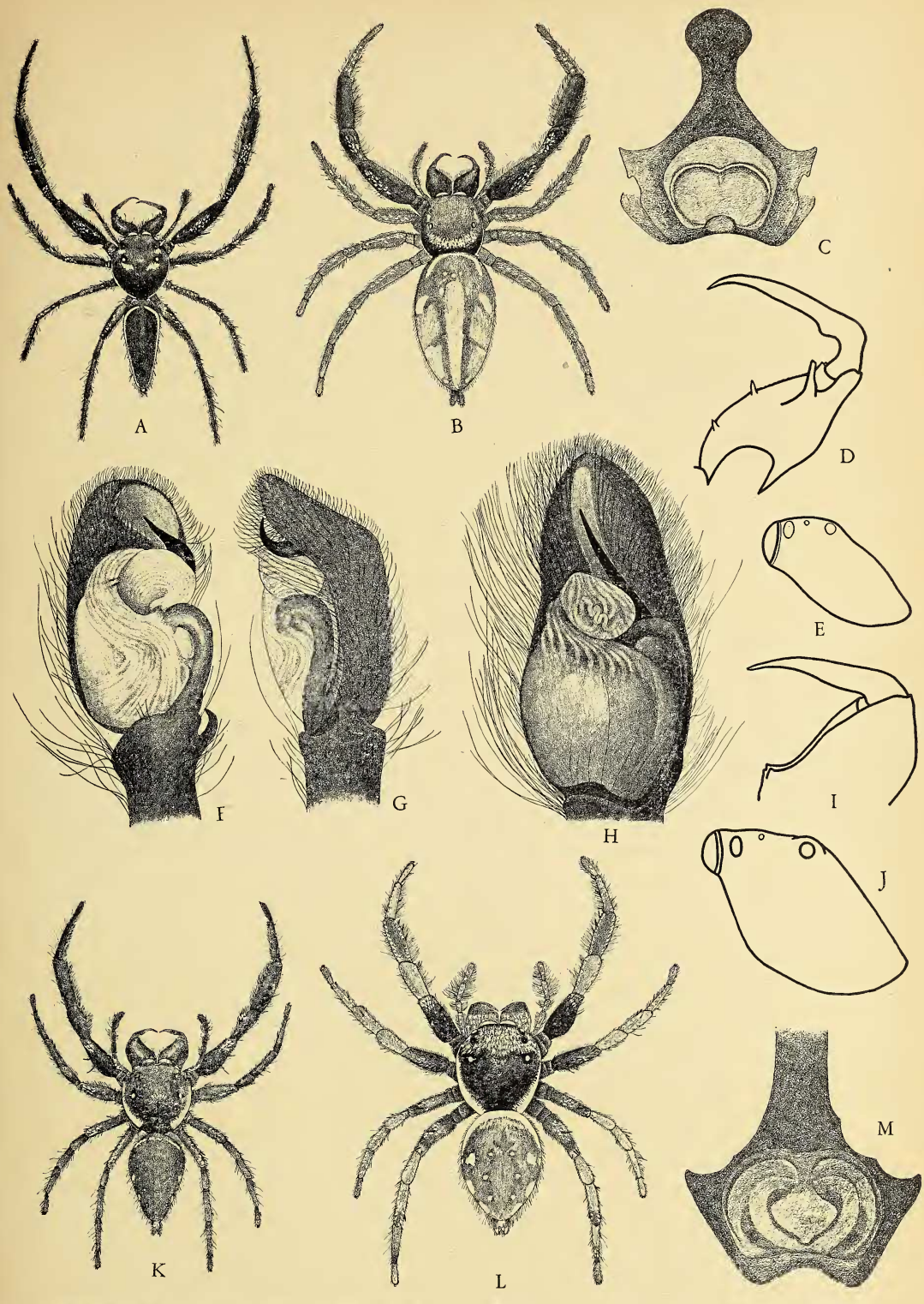
Parnaeus cyanidens, Peckham, 1896, p. 38, pl. iii, fig. 2; id., 1900, p. 301; F. Cambridge, 1901, p. 288, pl. xxvii, figs. 12, 13.

Dendryphantes cyanidens, Simon, 1901, p. 618,, fig. 746.

Color in Life: Two males and a female, from British Guiana and Venezuela. Ocular quadrangle and abdomen brilliant iridescent green; abdomen with four pairs of white spots set in a pair of black stripes; a basal white band and lateral white spots or bands set in an iridescent stripe. Chelicerae iridescent green, gold, blue, or reddish; integument and legs black and brown, except, in female, for orange-cinnamon anterior part of cephalothorax; a broad white marginal band around posterior half of cephalothorax; a median white spot between posterior eyes; white scales present on femora and palps, and, in female, on cephalothorax and chelicerae. Long black hairs on legs. Patella and tibia of palp with green iridescence in one male. All eyes black, the antero-medians rimmed narrowly below with white. Underparts black anteriorly; abdomen black or brown, faintly striped. Female differs from male in less brilliant and widespread iridescence, in cinnamon-orange anterior part of cephalothorax and in white scales on cephalothorax and chelicerae.

Measurements in mm.: Largest male, 7.5; smallest male (immature), 6.53; largest female, 8.9; smallest female (immature), 6.5.

Remarks: Our series agrees perfectly with the Peckhams' (1896, p. 38) description and figures, including the variation of the iridescence. The following minor differences and additional detail may be remarked; the white interocular spot and the iridescence on the male cephalothorax is apt to be missing in the preserved specimen; white scales are conspicuous in the cephalic region and on the chelicerae of the female; in our series there are no more than two white spots on the sides of the abdomen, instead of two or three bands; in the females, however, three bands are developed; the fourth pair of dorsal abdominal spots is usually



TEXT-FIG. 4. **A**, *Lurio solennis*, dorsal view, ♂; **B**, same, ♀; **C**, same, epigynum; **D**, same, ♂, chelicera, ventral view; **E**, same, cephalothorax, lateral view; **F**, same, ♂, left palpus, ventral view; **G**, same, ectal view; **H**, *Parnaeus cyanidens*, ♂, left palpus, ventral view; **I**, same, chelicera, ventral view; **J**, same, cephalothorax, lateral view; **K**, same, dorsal view, ♂; **L**, same, ♀; **M**, epigynum.

very faint; there is a patch of white hairs at the tip of the abdomen; in both sexes there are white scales on the basal segments of all femora. Striation pattern in palp variable.

Development: The young female has white scales on the thoracic part of the cephalothorax, as well as anteriorly. The pigment is feebly developed, and iridescence is practically lacking. The young male has almost full pigment, but scarcely any iridescence, and the palp is just commencing to be differentiated.

Parasite: A small mite was attached to the right posterior metatarsus of a full grown Guiana male.

Range: Previously known from Brazil and Guatemala. The present specimens give two additional nodes at Kartabo, Bartica District, British Guiana, and Caripito, State of Monagas, Venezuela.

Local Distribution: On bushes, roadside and low jungle (two males, Guiana and Venezuela).

Material: A total of nine specimens was taken as follows: *Kartabo*: 1920: Oct. 4, 1 ♂ (Cat. No. 2021); Nov. 11, 1 imm. ♀ (No. 201640). 1922: 1 ♂, 1 imm. ♂ (No. 22487). 1924: March 15, 1 ♀ (No. 24168); March 16, 1 imm. ♂ (No. 24169); April, 1 ♂, 1 imm. ♀ (No. 241049). *Caripito*: April 18, 1 ♂ (No. 42208).

Parnaeus smaragdus sp. nov.

Text.-fig. 5.

Color in Life: In general: black, with white spots and iridescent green patches in and near ocular quadrangle, a narrow white marginal line around posterior half of cephalothorax; iridescent green bands on abdomen; and pinkish-white scales and gold iridescence on legs.

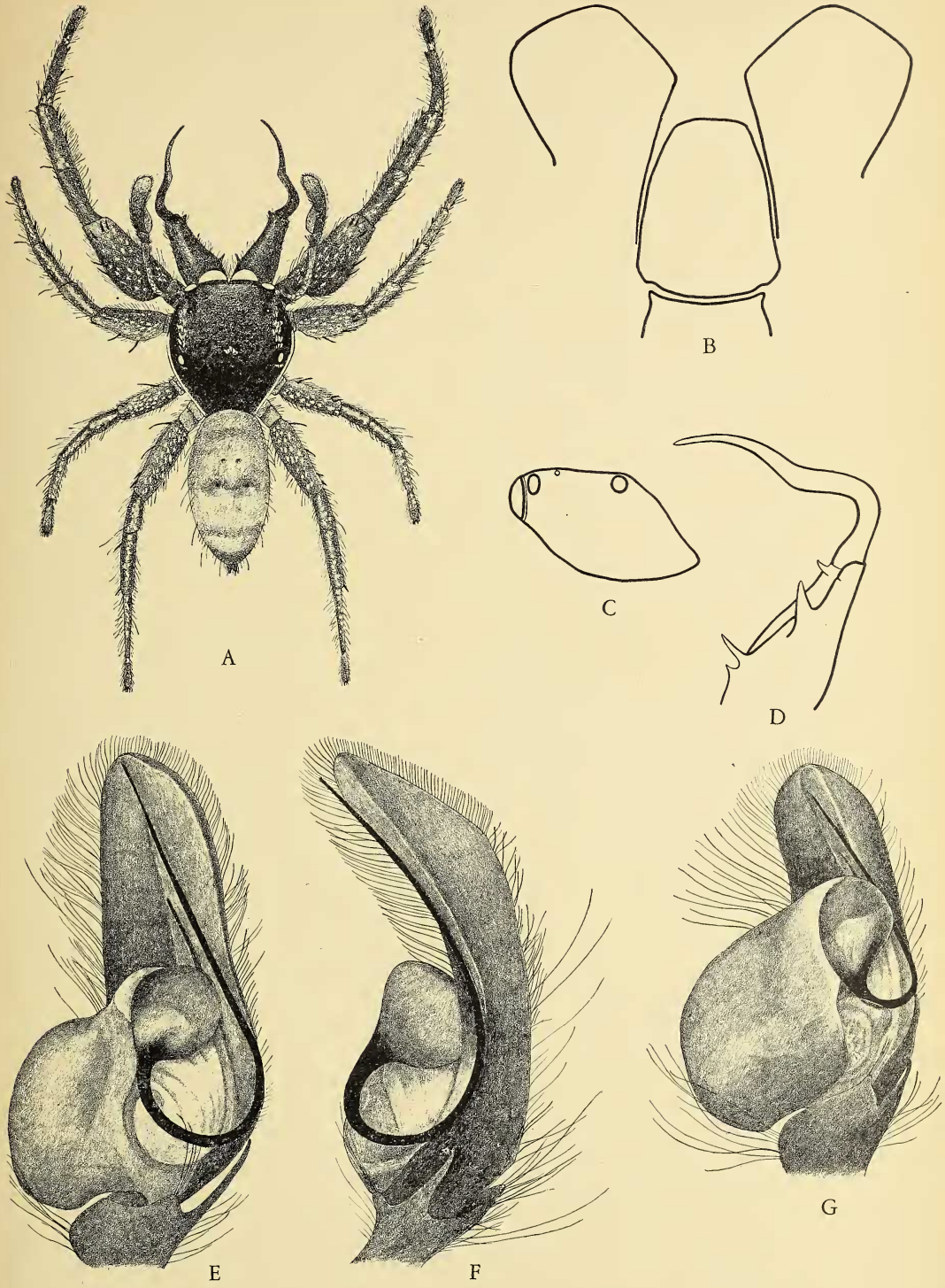
In detail: Adult male paratype: Integument of cephalothorax black with narrow marginal band of white scales extending posteriorly from slightly behind vertical from median eyes; a large patch of white scales on each side between small and posterior eyes; a pair of smaller patches behind posterior eyes; a tiny median patch in posterior part of ocular quadrangle. Patches of dark green iridescent scales on ocular quadrangle near eyes. A few long hairs in quadrangle region. Anterior half of abdomen benzo brown, posterior half with four transverse bands, the first and third iridescent golden green, the second and fourth blackish-brown; entire abdomen surrounded laterally with a band of green iridescence. Under parts black, abdomen brown anteriorly, black posteriorly, with lateral iridescence extending on to the ventral margins. Mandibles dark brown, without iridescence. Palp and legs dark brown with seashell pink iridescent scales on femora and irregular golden iridescent markings.

Immature male paratype: Like adult, but iridescence just developing; it is absent on cephalothorax, as are all white patches except those between small and posterior eyes; on abdomen are two median iridescent green spots, and the lateral band is silvery green; pinkish scales on femora few in number, gold iridescence lacking.

Color in Alcohol: Iridescence practically gone, femoral scales white; abdominal band white in young, absent or nearly absent in adults. The holotype, studied only in preservative, apparently had golden green iridescence in bands on anterior part of abdomen as well as posterior.

Structure: Cephalothorax typical of the genus, broad in middle, narrowing posteriorly; cephalic portion high, but with ocular quadrangle perfectly flat; sides bulging moderately in front of posterior eyes; thoracic slope steep, commencing close behind eyes. Ocular quadrangle, viewed from above, occupying more than half of cephalothorax; anterior eyes strongly recurved, close together; median eyes more than twice nearer first than third row; posterior eyes on dark tubercles, about as large as anterior lateral eyes. Quadrangle decidedly wider behind than in front; clypeus exceedingly narrow, about a tenth diameter of anterior median eyes. Mandibles long, porrect and divergent; teeth widely separated; one long, strong and pointed, directed slightly distally (fangward), at middle of inferior margin; two, close together, the distal much the longer, near base of superior margin; superior apical angle with a strong, spine-like cusp; fang long and strongly sinuous. Maxilla distally convex, prolonged into a moderate lobe on upper outer side; anterior margin of sternum slightly narrower than labium. Abdomen with two pairs of dorsal pits, the more posterior, at mid-abdomen, being the deeper. Legs 1-4-2-3. First leg considerably enlarged, especially the femur. Insertion of ventral spines on first tibia very variable, but those of inner row always confined at least to distal two-thirds. A weak fringe of hair on first tibia. Tibia of palp not quite half as long as patella; tibial spine long, slender, tapering, not curving downward at tip; bulb with large lateral lobe; embolus long and curving, arising from basal end of distal bulb, not from its external, distal side (as in *P. cuspidatus*), nor from its tip (as in *Phidippus*, *Metaphidippus*, etc.); a small, slim separate spine, arising from the external side of the median, tubuled mass of the bulb, is visible beside the embolus in basal part of its groove.

Measurements in mm.: Male holotype, total length 5.8; cephalothorax 2.7; ab-



TEXT-FIG. 5. *Parnaeus smaragdus* sp. nov. **A**, ♂ holotype, dorsal view; **B**, same, labium; **C**, same, cephalothorax, lateral view; **D**, same, chelicera, ventral view; **E**, same, left palpus, ventral view; **F**, same, ectal view; **G**, immature ♂ paratype, left palpus, ventral view.

domen 3.21. Male paratype, total length 5.91. Male paratype, immature, total length 6.0.

Development: The largest specimen is definitely immature, the cephalothorax and abdomen being both relatively slightly narrower, iridescence little developed, pigment weak and the tarsus of the palp with its embolus shorter. (Text-fig. 5G).

Affinities: The proposed new species is closely related to *Parnaeus cuspidatus* Cambridge, 1900, from the descriptions and figures of which it differs as follows: the details of the palp are different, including the non-apical origin and great development of the embolus, the presence of the secondary spine arising beneath the bulb, and the relative straightness of the tibial spine; there are white patches as described above on the cephalothorax; and the markings on the abdomen appear to be different.

Simon (1901, Supplément Général, p. 1055) suggested that Cambridge's *P. cuspidatus* and *P. fimbriatus* should be placed in the genus *Lurio*. If the position of the dorsal eyes is retained as an important generic character, however, this shift would be incorrect, since the ocular quadrangle, both in Cambridge's two species and in the present one, far from being parallel-sided as in *Lurio*, is wider posteriorly than even in *Parnaeus cyanidens*, or in most *Phidippus*. It seems more likely that when this character, plus the form of the palp and chelicerae, as well as the flatness of the ocular quadrangle at least in *smaragdus*, are considered, the erection of a new genus will be desirable. In the present scarcity of material and questionable taxonomic values of characters throughout the group, however, it does not seem feasible to take this step at the present time.

Range: Known from Kartabo, Bartica District, British Guiana, and Caripito, State of Monagas, Venezuela.

Local Distribution: Holotype shaken from bushes in low jungle; one paratype, immature, from mucka-mucka plants at low tide on river bank.

Parasites: No. 24103 had attached to it two scarlet mites, small and larger, one on each hind leg.

Material: A total of three specimens was taken as follows: *Kartabo:* 1924: March 3, 1 ♂ paratype (Cat. No. 24103); April 3, 1 ♂ paratype (No. 24348). *Caripito:* 1942: March 29 to April 15, 1 ♂ holotype (No. 42472).

Named *smaragdus* in reference to the iridescent green markings.

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